

## WHAT IS CLAIMED IS:

## 1. A droplet ejecting head comprising:

first heating elements, each having a thermal energy applying surface which imparts energy to a viscous fluid with a viscosity of at least 20 mPa·sec so as to evolve a bubble;

fluid supply channels, each having the first heating element on a wall and supplying said viscous fluid toward said first heating element; and

ejection nozzles through each of which said viscous fluid is ejected as a droplet and each of which is in a position opposite the thermal energy applying surface of said first heating element across the fluid supply channel,

wherein a distance between said thermal energy applying surface and a foremost end of the ejection nozzle from which the droplet is ejected is in a range of from 2  $\mu\text{m}$  to 8  $\mu\text{m}$ .

2. The droplet ejecting head according to claim 1, wherein a cross section of said ejection nozzle parallel to its ejecting surface has a smaller area than said thermal energy applying surface of said first heating element irrespective of a position at which the cross section of

the ejection nozzle is taken.

3. The droplet ejecting head according to claim 1, wherein a cross section of said ejection nozzle parallel to its ejecting surface becomes smaller as it is taken in a position closer to the foremost end of said ejection nozzle from which the droplet is ejected.

4. The droplet ejecting head according to claim 1, wherein said ejection nozzle is bored through a plate and a heat generating means for heating said viscous fluid is provided on the plate near the foremost end of said ejection nozzle from which the droplet is ejected.

5. The droplet ejecting head according to claim 4, wherein said heat generating means is a second group of heating elements that selectively generate heat and which are respectively provided in at least two segmented areas of said plate along perimeter of said ejection nozzle.

6. A droplet ejecting head comprising:  
first heating elements, each having a thermal energy  
applying surface which imparts energy to a viscous fluid  
with a viscosity of at least 20 mPa·sec so as to evolve

bubble;

fluid supply channels, each having the first heating element on a wall and supplying said viscous fluid toward said first heating element; and  
ejection nozzles through each of which said viscous fluid is ejected as a droplet and each of which is in a position opposite the thermal energy applying surface of said first heating element across the fluid supply channel, wherein a distance between said thermal energy applying surface and a foremost end of the ejection nozzle from which the droplet is ejected is smaller than a growth height of the bubble that has evolved in said viscous fluid by means of said first heating element and which has been left to expand by itself until its internal pressure once exceeding one atmosphere decreases to a point below one atmosphere.

7. The droplet ejecting head according to claim 6, wherein said distance between said thermal energy applying surface and said foremost end of said ejection nozzle from which the droplet is ejected is in a range of from 2  $\mu\text{m}$  to 8  $\mu\text{m}$ .

8. The droplet ejecting head according to claim 6, wherein a cross section of said ejection nozzle parallel to its

ejecting surface has a smaller area than said thermal energy applying surface of said first heating element irrespective of a position at which the cross section of the ejection nozzle is taken.

9. The droplet ejecting head according to claim 6, wherein a cross section of said ejection nozzle parallel to its ejecting surface becomes smaller as it is taken in a position closer to the foremost end of said ejection nozzle from which the droplet is ejected.

10. The droplet ejecting head according to claim 6, wherein said ejection nozzle is bored through a plate and a heat generating means for heating said viscous fluid is provided on the plate near the foremost end of said ejection nozzle from which the droplet is ejected.

11. The droplet ejecting head according to claim 10, wherein said heat generating means is a second group of heating elements that selectively generate heat and which are respectively provided in at least two segmented areas of said plate along perimeter of said ejection nozzle.